From: Robert Calhoun
To: Microsoft ATR
Date: 1/25/02 4:43pm
Subject: Microsoft Settlement

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This is in response to the request for Public Comment regarding Civil Action 98-1232 (CKK), United States of America vs. Microsoft Corporation.

I do not agree with the proposed settlement. I do not think that the remedies it provides will prevent Microsoft from continuing to abuse its monopoly power in the field of computer operating systems.

About me:
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I am a professional software developer. I develop custom software primarily for users of Microsoft operating systems. I use development tools sold by the Microsoft Corporation and by National Instruments. I also use and write software for the Apple Macintosh, primarily using development tools provided by Apple Computer.

I have used and programmed microcomputers since 1983. I have used and written web pages for the World Wide Web since 1993. My use of this technology predates Microsoft's interest in it, and this has an influence on my comments. I have a strong belief that the World Wide Web should be based on open standards which allow any software developer to write a browser which allows the user to experience the World Wide Web fully.

My specific suggests on the remedies follow my comments on the complaint.

On the complaint:
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The Government's 1998 complaint is focused on web browsers, specifically on Internet Explorer 4. At this point, Microsoft has released improved versions of their browser, known as Internet Explorer 5 ("IE5") and Internet Explorer 6 ("IE6"). The so-called "browser war" is essentially over, with Microsoft Internet Explorer substantially obliterating the competition from a market-share point of view. (Recent browser usage statistics from TheCounter.com show IE5 has the largest share, at 64%; combined statistics for IE4, IE5, and IE6 top 90%.)

If anything, the Government's complaint underestimates the efforts that Microsoft has taken to reach this outcome. A large part of the problem is the significant amount of time that has elapsed since the complaint was filed. Much of this delay is due to requests for stay and appeals that Microsoft has made. I believe that Microsoft has attempted to delay resolution of this complaint until the political winds changed in Washington, or until the issue became irrelevant. Both have occurred.

Microsoft is clearly capable of writing a best-in-class browser. Microsoft's browser for the Macintosh, IE5 for Macintosh OS 9, is arguably the best browser on any platform. It combines reasonably good standards adherence with significant user-interface enhancements. Apple now ships this browser with every Macintosh. While the browser is certainly very good on its own merits, it has been suggested that Microsoft required Apple to make IE5 the default browser in order for the development of Microsoft Office for the Macintosh to continue. I do not know if such allegations are true, but they are worrisome.

IE5 on the Windows platform also impressive features. One of the most impressive, especially compared with Netscape's offerings, is its rapid launch speed. IE5 simply demolishes the later versions of Netscape Communicator in launch speed and memory footprint.

This rapid launch speed is partially the result of the fact that many parts of IE5 are now built in to the Windows operating system. Not only does IE5 make great use of these specialized operating system components, several software components which are essential for operation of non-browser software are installed as part of the Internet Explorer 5 installation process. Nowhere is this more clear than in the nature of the "file browser" used in Window 2000. This browser is essentially the same software as IE5.

One is called "Explorer.exe" and one is called "IEXPLORE.EXE", but these two applications have so much in common that it is possible to surf the Web with Explorer, or investigate files on a disk drive with Internet Explorer.

It is a well-known fact to software developers that many strange and inexplicable problems with deploying projects that make use of Microsoft's ActiveX technology are solved by the installation of IE5. I do believe that Microsoft is correct when they declare that Internet Explorer is fundamental to the functioning of the Windows operating system. I also believe that they deliberately created this situation. Microsoft has made IE5 an integral part of the Windows operating system, to the point that it Internet Explorer now has its own section under "Internet Explorer: Platform SDK [Software Development Kit]". IE5 is Microsoft's recommended "container" for testing component software using Microsoft's ActiveX interface, and it is at this point 100% necessary when developing certain (non-browser) software on the platform. A World Wide Web full of web pages designed to be viewed with Internet Explorer is a difficult place for the users of other browswers.

I feel I need to make it clear that I don't have a problem with Microsoft adding web capabilities to the core of the Windows operating system. I am not against Microsoft innovating in this area nor in any other area of software development. Certain features (accessing Web pages, parsing the HTML language used to write them, etc.) are relatively low-level functions that arguably belong in a modern operating system. Microsoft has added many, many other operating system technologies (DirectX, NetShow, Windows Media) which also give the end user a richer experience and make it easier for developers to write software for the Microsoft Windows platform.

Where I disagree with Microsoft's approach is that they tend to view any software which has a significant, or potentially significant, market as an area in which they should seek a dominant market position, and they use their monopoly power in operating systems to achieve this.

The principal approach used is a) add components to the operating system which give the operating system new power and flexibility, b) allowing Microsoft's internal software developers superior access to these technologies and c) giving away technologies for free in order to obtain a dominant market position.

With respect to (a) and (b), Microsoft has at different times claimed on one hand that a "brick wall" exists between its operating system groups and its end-user groups, and on the other that customers would suffer harm if the closely coupled operating system groups and end-user groups were broken up into two separate companies. These two statements are mutually exclusive. With respect to (c), Microsoft has argued that free software is in the consumer's best interest. Free software is unquestionably in the consumer's best short-term interest. Sometimes, however, the process is in Microsoft's best long-term interest. As an example, take Microsoft's proposed settlement of the present case with those States which have not signed on to the Justice Department's proposed settlement. Microsoft offered to give refurbished computers and Microsoft software worth a total of approximately $1 billion to the nation's poorest 14,000 school districts. Schools are one of the few markets where one of Microsoft's few remaining competitors in the operating system market, Apple Computer, has a significant market share. The purpose of these free computers and free software appears to be twofold: first, to help students in these poor districts, and second, to ensure these districts make a decisive switch to Microsoft operating systems.

Were it not for Microsoft's monopoly power, I would not be concerned by any of their business practices. The close working relationship between operating system engineers and end-user product engineers is, for example, carried on at Apple Computer and has resulted in the release of highly respected products such as Final Cut Pro (video editing software), to the detriment of the former market leader in this area, Avid. But since Apple Computer does not have monopoly power, it cannot be argued that Apple's

actions are in violation of the Sherman Anti-Trust Act. It is only because
of Microsoft's monopoly power that we must view their business actions in
a different, and more critical, light.

In this light, the original 1998 complaint of the Government should be
properly viewed as an *example* of Microsoft's anticompetitive practices,
rather than a *summary* of Microsoft's anticompetitive practices. The
example in the original complaint is no longer relevant, as Microsoft has
obtained the market supremacy with Internet Explorer that it desired.
It is too late to correct this: nothing can be done about Internet
Explorer's dominance at this point. Rather, the goal of any settlement
should be to ensure that Microsoft does not continue to exploit its
monopoly power in an illegal and noncompetitive manner.

Areas which Microsoft does not yet have market dominance, but which it is
currently seeking market dominance comprise the following:

1) The market for streaming audio and video.

Currently there are three dominant players: Real Networks's RealMedia,
Microsoft's Windows Media, and Apple's Quicktime Streaming. It is generally
agreed that the Real Networks product yields the best user experience over
unpredictable public networks. Microsoft is currently seeking market
dominance in this area by bundling the Windows Media Player with its
operating system. This is not always the best experience for consumers; I
have found the Windows Media Player to be slow and ungainly for listening
to simple .WAV audio files compared with Microsoft's older and less
sophisticated audio player, which is no longer available.

2) On-line services.

AOL is still the dominant on-line service despite Microsoft's investment in
MSN. Microsoft still attempts to increase the use of MSN via a) in-store
promotions for new PC owners b) desktop icons for MSN and c) MSN as the
default start-up screen for Internet Explorer. If not for these constant
promotions and heavy subsidy from Microsoft, it's unlikely that an
unprofitable enterprise like MSN would still exist.

AOL allegedly bought Netscape more for the Netscape "portal" than for
Netscape's software. This is supported by the fact that the AOL browser is
based on Internet Explorer rather than the Netscape browser. AOL failed to
realize that as the use of the Netscape browser fell to single digit
percentages, the value of the Netscape portal (which was the default home
page for that browser) would fall accordingly, which it has.

Microsoft has argued that AOL's purchase of Netscape suggests that Netscape
was actually a successful, viable company despite Microsoft's
anticompetitive efforts. Microsoft has also argued that AOL has squandered
this asset, and now seeks legal redress for AOL's failure to use the
Netscape resources in an effective manner.

I cannot really argue this latter point. AOL was unwise to buy Netscape,
which was clearly headed for bankruptcy and, whether or not AOL acquired it,
a complete exodus of key personnel. AOL tremendously overvalued Netscape as
an asset. It overpaid for it, and it has completely failed to use what
remained of Netscape's technological assets in a remotely effective way.
Just because AOL is dumb does not mean that Microsoft does not have monopoly
power, that they did not abuse that monopoly power in the Netscape case, or
that they will not continue to abuse their monopoly power in the future.

AOL's purchase of Netscape should be viewed in light of the whole Internet
bubble economy, which allowed marginally profitable companies like AOL to
buy other companies with overvalued stock. In the case of Netscape, AOL got
little for its overvalued AOL shares. In the case of Time-Warner, AOL got a
lot. The $4.2 billion dollar Netscape acquisition does not imply that
Netscape had a fair-market value of $4.2 billion dollars, because no one in
their right mind would pay $4 billion dollars in cash for Netscape.

Microsoft has stated that AOL spent $10 billion for Netscape, but this is incorrect.

3) Database Technology.

Microsoft current makes an excellent database server, known as MSDE, available to developers who own Microsoft's development suite, known as Visual Studio. This product is of very high quality, and developers may deploy it free of charge. The goal appears to be to encourage the use of database routines which are compatible with Microsoft's enterprise-class database product, SQL Server. Microsoft also has developed a blizzard of database-interface technologies (ODBC, OLE-DB, DAO, RDO, ADO, and now parts of the new .NET) which the most diligent database provider would have a hard time keeping up with.

I speak as a developer here. I need to use database technologies in my Microsoft Windows-based applications, and I use MSDE. It's free, it's fast, and it works well with Microsoft's ADO layer, since Microsoft wrote ADO, the OLE-DB layer that ADO calls, and the SQL-Server layer at the bottom. I doubt that Oracle, IBM, Sybase, and MySQL have the same ability to keep up with Microsoft's changing interface layers that Microsoft's own engineers have.

There are many other examples of areas where Microsoft is currently seeking market dominance. The settlement should be designed to allow Microsoft and other software venders to compete in an unfettered manner without giving Microsoft the unfair advantage of having written the operating system.

Regarding the Settlement:
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Sections A-C:

These remedies are focused on preventing Microsoft from retaliating against hardware venders (OEMs) for installing non-Microsoft middleware. The remedies do not prevent Microsoft from installing Microsoft middleware along with the operating system, or at a later time via an automatic download.

In the past, installation of Microsoft software components has often broken competing products that offer similar services. It is not clear whether the behavior is intentional or a result of the relative fragility of the Windows operating system. Usually the end-user's best option is to stop using the non-Microsoft product.

Merely preventing Microsoft from retaliating against OEMs is insufficient.

Section D:

This remedy is not enforceable. The Windows API is very complicated. Portions of it could be left undocumented, or provided with documentation which is vague or difficult to understand, and it would be very difficult to prove otherwise. Because the API is so large, it is unlikely that third parties could verify that Microsoft's own engineers used only publicly documented routines in publicly documented ways without a very large engineering effort.

Section J:

Cryptography experts agree that secure cryptographic systems are best built on published algorithms which have a strong mathematical basis for their robustness. This section allows Microsoft to modify cryptography systems, such as the Kerberos system developed at MIT, while keeping the changes

private. This makes it hard for ISVs to develop products (such as VPNs) which are compatible with Microsoft's offerings.

In General:
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o The settlement affects only "Middleware". This does not address Microsoft's end-user applications such as Microsoft Office, a widely used program with a proprietary file format. This program has been used to influence the actions of Apple Computer and the lack of it on the Linux operating system makes it difficult to use Linux in an office environment.

o Microsoft's approach to software development makes heavy use of shared code ("DLLs") and shared user interface features "ActiveX controls". It is possible for Microsoft to write applications which make use of these DLLs and ActiveX controls to create end-user applications that launch very fast and use little non-shared memory. With these objects built in to the operating system, ISVs have a hard time creating software that can match the small installation size of Microsoft applications.

   While 3rd parties can add DLLs and ActiveX controls to Windows, they clearly can never remove a pre-existing Microsoft component, which might cause the OS to break. This provides Microsoft with a significant advantage.

o The settlement does not address publication of the proprietary networking protocol SMB/CIFS, which any competing operating system must support in order to network with Windows computers. Although Microsoft calls this the "Common Internet File System", it is undocumented.

o The settlement will be difficult to enforce. Microsoft violated the previous consent decree which was supposed to prevented it from charging OEMs for Windows on a per-machine (rather than per copy of Windows) basis. Nothing was done to Microsoft for violating this consent decree.

o A simpler solution would be to break Microsoft into two or more companies, one of which would own the Windows operating system and its successors, and one of which would own end-user applications.

   This approach worked well with Standard Oil and with AT&T. AT&T's situation was vastly more complicated than a Microsoft split would be because of the physical infrastructure involved and the overly specific way the settlement was written. In contrast, IBM was never split up. The IBM consent decree dragged on and on, providing a restraint on IBM's activities and hurting its international competitiveness.

   I do not want Microsoft's international competitiveness to be damaged. But I do not want them to become the only viable vender of software for large markets.

   Microsoft could be split into two companies fairly easily. Both companies could compete, both companies could be successful, and both could have high stock prices. This is the easiest way to ensure that Microsoft provides a level playing field for non-Microsoft software developers.

Sincerely yours,

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